Hakimatul Husniyah, 2018, **Skrining dan Uji Potensi Entomopatogen Lokal (*Bacillus* sp.) dari Larva *Aedes aegypti*** , Skripsi ini di bawah bimbingan Drs. Salamun, M.Kes. dan Dr. Ni'matuzahroh, Departemen Biologi Fakultas Sains dan Teknologi, Universitas Airlangga, Surabaya.

ABSTRAK

Penelitian ini mencakup isolasi bakteri entomopatogen lokal *Bacillus* sp. dari tubuh larva *Aedes aegypti* dan uji potensi bakteri entomopatogen lokal *Bacillus* sp. dalam membunuh larva instar III *Aedes aegypti*. Penelitian ini merupakan penelitian deskriptif dengan pendekatan kualitatif dan kuantitatif. Isolasi *Bacillus* sp. dilakukan dengan cara penghancuran larva sampel kemudian dipanaskan dalam suhu 70^{o}C dan dilakukan pengenceran 10^{-1}-10^{-3}. Masing-masing pengenceran diinokulasi dengan metode cawan dan diinkubasi selama 48 jam. Pemurnian bakteri yang diduga sebagai *Bacillus* dilakukan dan dilanjutkan dengan uji mikroskopis berupa pewarnaan Gram dan pewarnaan spora. Isolat *Bacillus* sp. yang berhasil didapatkan kemudian digunakan untuk uji potensi tahap pendahuluan dan tahap lanjutan terhadap larva instar III *Aedes aegypti*. Data divisualisasikan dalam bentuk tabel dan grafik dan dianalisis secara deskriptif. Hasil penelitian menunjukkan bahwa pada uji potensi tahap pendahuluan, dari 120 isolat *Bacillus* sp. yang didapat, sebanyak 32% tidak berpotensi, 41% berpotensi rendah, 15% berpotensi sedang, dan 12% berpotensi tinggi. Hasil uji tahap lanjutan pada isolat yang berpotensi tinggi diperoleh 3 isolat yang paling berpotensi yaitu isolat dengan kode SB3 3, SB9 1, dan SD4 2 dengan persentase mortalitas larva masing-masing sebesar 100%, 96,7%, dan 100%.

Kata kunci : *Bacillus* sp., entomopatogen, skrining, uji potensi

Hakimatul Husniyah, 2018, **Screening and Potential Test of Local Entomopathogen (*Bacillus* sp.) From *Aedes aegypti* Larvae**, This script is guided by Drs. Salamun, M.Kes. and Dr. Ni'matuzahroh, Department of Biology, Faculty of Science and Technology, Airlangga University, Surabaya.

ABSTRACT

This study aimed to isolate local entomopathogenic bacteria *Bacillus* sp. from the body of *Aedes aegypti* larvae and to know the potency of local entomopathogenic bacteria *Bacillus* sp. in killing *Aedes aegypti* III instar larvae. This research was descriptive study with qualitative and quantitative approaches. *Bacillus* sp. was isolated by destroying the larvae sample and heated in a temperature of 70ºC. Then, the sample was diluted 10^{-1}–10^{-3}. After that, each dilution was grown for 48 hours. Then, purification of bacteria suspected as *Bacillus* was performed. Gram staining and spore staining as microscopic tests were carried out on colonies that resembled *Bacillus* sp.. *Bacillus sp* isolate which have been obtained was used in preliminary and advanced stages of potential test against instar larvae III of *Aedes aegypti*. Data was visualized in tables and graphs, then analyzed descriptively. The results of the study showed that in the preliminary stage of potential test, 120 isolates of *Bacillus* sp. were obtained, as many as 32% had no potency, 41% had low potency, 15% had moderate potency, and 12% had high potency. The results of the advanced stage of potential tests on high-potential isolates showed 3 isolates with the highest potency in killing *Aedes aegypti* larvae. They were SB3 3, SB9 1, and SD4 2 with percentage of larval mortality of 100%, 96.7%, and 100%, respectively.

Key words: Bacillus sp., entomophatogen, screening, potential test